

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for monitoring an antenna of a mobile station comprising:

a current sensing circuit to sense a current consumption amount of a power amplifier that amplifies a transmission signal;

a baseband chip to determine malfunction of a first antenna based on the sensed current, the baseband chip to control switching to a second antenna when the first antenna is determined to be malfunctioned; and

a communication band switch to selectively switch the transmission signal from the first antenna to the second antenna based on the baseband chip, wherein the communication band switch includes:

a first switch to transmit or receive first signals based on a band control signal;

a second switch to transmit or receive second signals based on a band control signal; and

a third switch to select between the first antenna and the second antenna based on a signal from the baseband chip, the third switch to apply a power amplified signal to the selected first or second antenna.

2. (Original) The apparatus of claim 1, wherein the baseband chip further informs a user of antenna malfunction when at least one of the antennas malfunctions.

3. (Original) The apparatus of claim 1, wherein the current sensing circuit comprises:
a resistor coupled between a node 'A' and a node 'B', the node 'A' coupled to a battery voltage terminal and the node 'B' coupled to a power source voltage terminal of the power amplifier, the resistor to sense the current consumption amount of the power amplifier;
and

a comparator to output a voltage level corresponding to a voltage difference between a voltage of the node 'A' and a voltage of the node 'B'.

4. (Original) The apparatus of claim 3, wherein the voltage of the node 'A' is input to a non-inverted input terminal of the comparator and the voltage of the node 'B' is input to an inverted input terminal of the comparator.

5. (Previously Presented) The apparatus of claim 1, wherein the baseband chip determines malfunction of the first antenna when the sensed current increases.

6. (Original) The apparatus of claim 5, wherein if the increased amount of current is not within a tolerance range for determining a normal state of the antenna, the baseband chip determines that the first antenna is in an electrically malfunction state.

7. (Currently Amended) The apparatus of claim 1, wherein the communication band ~~switch comprises~~ further includes:

a duplexer to separate the first signals and the second signals by low pass filtering and high pass filtering;

~~a first switch to transmit and receive the first signals according to a band switching control signal input to a band switching control terminal;~~

~~a second switch to transmit and receive the second signals according to the band switching control signal; and~~

~~a third switch to switch the power amplified transmission signal received from the duplexer to one of the first antenna and the second antenna based on a switching control signal of the baseband chip.~~

8. (Original) The apparatus of claim 1, wherein the first antenna comprises an antenna that is currently connected to a transmission path of the transmission signal, and the second antenna comprises a preliminarily provided antenna.

9. (Previously Presented) The apparatus of claim 1, wherein the first antenna comprises an external antenna.

10. (Previously Presented) The apparatus of claim 1, wherein the second antenna comprises an external antenna.

11. (Currently Amended) An apparatus for monitoring an antenna of a mobile station comprising:

a resistor coupled between a battery voltage terminal and a power source voltage terminal of a power amplifier to sense a current consumption amount of the power amplifier;

a comparator to detect a voltage level corresponding to an amount of voltage drop due to the resistor; and

a baseband chip to determine that the antenna connected to a current transmission path is in an electrically malfunction state based on the detected voltage level; and

a band switch to switch a signal between the first antenna and another antenna, wherein the band switch includes:

a first switch to transmit or receive first signals based on a band control signal;

a second switch to transmit or receive second signals based on a band control signal; and

a third switch to select between the antenna and the another antenna based on a signal from the baseband chip, the third switch to apply a power amplified signal to the selected antenna.

12. (Currently Amended) The apparatus of claim 11, wherein if the antenna is determined to be in a malfunction state, the baseband chip generates a switching control signal to switch the current transmission path to a ~~preliminary~~ the another antenna.

13. (Currently Amended) The apparatus of claim 12, wherein if the antenna is determined to be in the malfunction state and the ~~preliminary~~ another antenna is in an electrically malfunction state, the baseband chip informs a user of the abnormal operation of the antennas.

14-23. (Canceled)

24. (Currently Amended) A mobile terminal, comprising:
a first device to determine a state of a first antenna; and
a second device to switch to operation of a second antenna based on the determination of the first device, wherein the second device includes:
a duplexer to separate first signals and second signals by filtering;

a first switch to transmit and receive the first signals according to a band switching control signal;

a second switch to transmit and receive the second signals according to the band switching control signal; and

a third switch to switch a power-amplified transmission signal ~~received from the duplexer~~ to one of the first antenna and the second antenna based on a switching control signal of a baseband chip.

25. (Previously Presented) The mobile terminal of claim 24, wherein the first device comprises:

a circuit to sense current consumption of an amplifier; and
the baseband chip to determine the state of the first antenna based on the sensed current.

26. (Original) The mobile terminal of claim 25, wherein the second device switches to operation of the second antenna when the first antenna is determined to be malfunctioning.

27. (Previously Presented) The mobile terminal of claim 25, wherein the circuit comprises:

a resistor coupled between a node 'A' and a node 'B', the node 'A' coupled to a battery voltage terminal and the node 'B' coupled to a power source voltage terminal of an amplifier, the resistor to sense the current consumption amount of the amplifier; and

a comparator to output a voltage level corresponding to a voltage difference between a voltage of the node 'A' and a voltage of the node 'B'.

28. (Canceled)

29. (Previously Presented) The apparatus of claim 11, wherein the baseband chip determines that the antenna is in the electrically malfunction state based on an increased voltage level.

30. (Currently Amended) The apparatus of claim 11, ~~further comprising a~~ wherein ~~the band switch to switch a signal from the antenna to another antenna, the band switch including~~ further includes:

a duplexer to separate the first signals and the second signals by filtering;

~~a first switch to transmit and receive the first signals according to a band switching control signal;~~

~~a second switch to transmit and receive the second signals according to the band switching control signal; and~~

Serial No. **10/780,939**

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Reply to Office Action of March 20, 2006

~~a third switch to switch the transmission signal received from the duplexer to one of the antenna and the another antenna based on a switching control signal of the baseband chip.~~